1. As to the difference of temperature between the two kinds of blood. In the experiments on the recently-dead animal, the temperature of the blood in the right ventriclo was found once higher, and twice equal to that of the left. The temperature of the blood in the ascending cava was found .72° C. higher than in the carotid. In the experiments on tho living animal, in which the temperature was constant, that of the venous blood was found constantly higher than that of the arterial by .07° to .19° C. on an average of the minima and maxima.

2. As to the differences in temperature of the venous blood at different parts of the circulation. The temperature of the blood in the large vessels coming from the head and extremities, rises as we approach the vena cava inferior, in which the blood reaches its highest temperature. This change does not reach a high value for small distances in the vena cava superior, but is rapid in the auricle, where the mixture of abdominal blood is greater. A similar rise is observed in the iliac vein. The temperature of the venous blood of the extremities is far lower than that of the vena cava inferior, or the right heart. The differences in the arterial blood are far smaller; they are not even appreciable at less than 6 cn. from the heart.

3. As to the changes of temperature at one and the same level of the arterial or venous system. The temperature in the veins varies regularly in inspiration. This is observable in the larger venous trunks of the chest and belly, except the vena cava inferior. In the superior cava, the rise takes place at the end of inspiration; it reaches its highest point in the interval, falls at the end of expiration, and is at its lowest point after expiration.

Maximum.	Minimum.	Maximum.	Minimum.
Inspiration —	Expiration —	Inspiration —	Expiration — Inspiration.

The osoillations in regular breathing are from .07° to .10° C. These oscillations are thus explained. In inspiration, the pressure of the diaphragm and abdominal viscera causes an increased flow of blood from the vena cava inferior into the right ventricle, which overpowers the stream from the vena cava superior; while in expiration, the flow of blood occurs towards the vena cava inferior, and its exit is impeded. The exit of blood from the vena cava inferior is also impeded, but not to so great an extent. Now tho blood of the inferior cava being warmer than that of the superior, it follows that the blood in the right ventricle will bo found warmest just after inspiration. Their maxima and minima will be found at different periods of inspiration, in different parts of the circulation, according to the period at which the stream of blood reached them. —*British and Foreign Medico-Chirurgical Review*, July, 1853.

7. *Observations on the State of the Blood and the Bloodvessels in Inflammation.* By T. Wharton Jones, F. R. S. (Proceedings of the Royal Medical and Chirurgical Society, June 7, 1853.)—The author, after alluding to the objections raised by some observers to the conclusions respecting the character of the inflammatory process in mammifera, from experiments upon cold-blooded animals, refers to his observations upon the pulsation of veins, as seen in the circulation of the wing of the bat, and published in the *Philosophical Transactions*. He affirms that there will be found similarity in the inflammatory process in the two classes of animals, and that with proper precautions we may accept the information afforded by microscopical examinations from both. He then describes at some length the effects produced upon the circulation by the complete division of the bloodvessels. An artery, on being cut across, becomes constricted upwards in the direction of its trunk, and downwards in the direction of its ultimate ramifications; and so far as this constriction extends the flow of blood in the vessel is arrested. In a minute or two, relaxation of the wall of the artery, and dilatation of its bore, are observed to take place, and then we find that in the upper part of the artery the flow of blood becomes re-established as far down as the first considerable branch proceeding from it above the place of section. Below the wound, a retrograde current is kept up in the cut artery, through the medium of an anastomosing vessel, but this retrograde stream passes

off in a direct channel by branches leading from the artery. The retrograde stream flows more or less sluggishly, and the blood is loaded with red corpuscles. The author has not found veins become constricted after section, like arteries. In the upper segment of a divided vein, there is no farther flow of blood up to the first considerable branch which joins the vessel above the wound. From the vein below the place of section, the blood which enters in a natural direction by one set of radicles flows out in a retrograde course by another set. Internal clots are formed by accumulation of blood within the cut ends of the artery. The effect on the circulation of the part to which the divided vessels lead is, the blood in the last arterial ramifications, in the capillaries, and in the venous radicles, flows tardily, and becomes loaded with red corpuscles, which aggregate together. In some of the vessels there takes place actual stagnation of the aggregated corpuscles. This effect is explained by the circuitous route which the blood has to follow through anastomosing branches to arrive at the last arterial ramifications; the blood-corpuscles are allowed to aggregate in consequence of diminished *vis à tergo*. The author believes that inflammatory redness may depend upon two causes—a stagnation of the blood, as commonly described, and also upon an increased rapidity of the flow through dilated arteries. He mentions the effect of the division of the ischiatic nerve in promoting the disappearance of inflammatory redness in the web of the frog's foot, by causing a yielding of the coats of the arteries, and an increase in their caliber. He believes that this depends upon the section of the filaments of the sympathetic nerve.—*Lancet*, June 25, 1853.

8. *Phrenic Nerve.*—The following are Luschka's conclusions respecting this nerve:—

"1. The phrenic is not merely a motor nerve, but a mixed nerve, containing sensory filaments distributed to the pleura, pericardium, and the peritoneum, covering the diaphragm, and on the anterior wall of the belly. It is also distributed to the coronary and suspensory ligaments of the liver.

"2. It brings about a double interchange of fibres between the sympathetic and spinal nerves, since organic nerve-fibres go to it from the inferior and occasionally the middle cervical ganglion, and it gives, by its abdominal portion, fibres to the solar plexus.

"3. In the majority of cases, the phrenic arises but from one cervical nerve—the fourth.

"4. The diaphragmatic branches he traces to the tendinous centre, the inferior vena cava, the right auricle, and the liver.

"5. In its course over the pericardium it appears to be endangered in diseases of the pleura and lungs, especially tubercular. Hence, probably, some of the disturbances of respiration in these complaints."—*British and Foreign Medico-Chirurgical Review*, from *Schmidt's Jahrbuch*. iii. 1853.

9. *On the Physiological Uses of the Ganglionic Nervous System.*—Dr. Davey read a paper on this subject before the Medical Society of London, the principal object of which was to prove the independency of the organic nervous system, and, what is more, the dependency of the integrity of the cerebro-spinal system, in common with all the organism, on it. To prove his position, Dr. Davey brought forward a variety of facts, more or less startling, and these, selected with much apparent care, seemed to tell much in favour of the physiological views insisted on. After some preliminary remarks, intended to show the unsatisfactory and contradictory opinions expressed by our most popular writers on medicine (physiology), viz. Wagner, Todd and Bowman, Carpenter, and others, concerning the ganglionic nervous system, he affirmed, on the authority of many good names, that the ganglion of the sympathetic nerve are those parts first formed in the fœtus, and that this same fact obtains equally, it was premised, through the whole animal kingdom. The early organism of birds was referred to in confirmation of that opinion, which assigns to the solar ganglion and its dependencies an existence anterior to any other part of the animal fabric. Especial reference was made to the two monstrosities recorded by Mr. Lawrence and Dr. Marshall Hall. The first of these it is known was born without a brain,